

Given a list of N integers $A = [a_1, a_2, \dots, a_N]$, you have to find those integers which are repeated at least K times. In case no such element exists you have to print `-1`.

If there are multiple elements in A which are repeated at least K times, then print these elements ordered by their first occurrence in the list.

Let's say $A = [4, 5, 2, 5, 4, 3, 1, 3, 4]$ and $K = 2$. Then the output is

```
4 5 3
```

because these numbers have appeared at least 2 times.
Among these numbers,
4 has appeared first at position 1,
5 has appeared next at position 2,
and 3 has appeared thereafter at position 6.
That's why, we print in the order 4, 5 and finally 3.

Input

First line contains an integer, T , the number of test cases. Then T test cases follow.
Each test case consist of two lines. First line will contain two space separated integers, N and K , where N is the size of list A , and K represents the repetition count. In the second line, there are N space separated integers which represent the elements of list $A = [a_1, a_2, \dots, a_N]$.

Output

For each test case, you have to print all those integers which have appeared in the list at least K times in the order of their first appearance, separated by space. If no such element exists, then print `-1`.

Constraints

- $1 \leq T \leq 10$
- $1 \leq N \leq 10000$
- $1 \leq K \leq N$
- $1 \leq a_i \leq 10^9$

Sample Input

```
3
9 2
4 5 2 5 4 3 1 3 4
9 4
4 5 2 5 4 3 1 3 4
10 2
5 4 3 2 1 1 2 3 4 5
```

Sample Output

```
4 5 3
-1
```

Explanation

Sample Case #01: This is the same example mentioned in the problem statement above.

Sample Case #02: As no elements repeats more than 3 times, we don't have any elements satisfying the criteria of minimum K times.

Sample Case #03: All elements are repeated 2 times. So we print all of them according to their order of occurrence, which is 5 -> 4 -> 3 -> 2 -> 1.